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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,112	03/01/2002	Fuqiang Jin	PHA 2001US 08841.105031	6704
20786	7590	11/25/2003	EXAMINER	
KING & SPALDING 191 PEACHTREE STREET, N.E. ATLANTA, GA 30303-1763			MCKENZIE, THOMAS C	
			ART UNIT	PAPER NUMBER
			1624	
DATE MAILED: 11/25/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,112

Applicant(s)

JIN ET AL.

Examiner

Thomas McKenzie Ph.D.

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 47-59 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 25,27,29,35 and 41 is/are rejected.
- 7) ☒ Claim(s) 26,28,30-34,36-40 and 42-46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4&6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to an election filed on 10/20/03. There are fifty-nine claims pending and forty-six under consideration. Claims 25-28 are compound claims. Claims 1-24 and 29-46 are synthesis claims. This is the first action on the merits. The application concerns some syntheses of the anti-viral drug D4FC.

Election/Restrictions

2. Applicant's election without traverse of Group I in Paper No. 8 is acknowledged.

3. Claims 47-59 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Abstract

4. A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, *e.g.*, "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." For processes, the type reaction, reagents, and process conditions should be stated, generally illustrated by a single example unless variations are necessary. The abstract should describe the disclosure sufficiently to assist readers

in deciding whether there is a need for consulting the full patent text for details. The abstract is too short and generic. Examiner suggests claim 1, including the figure, and the utility.

Oath/Declaration

5. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The oath or declaration is defective because: Non-initialed and/or non-dated alterations have been made to Inventor Jin's address. See 37 CFR 1.52(c).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 29, 35, and 41 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In each claim Applicants have the limitation "X is Cl, Br, or IV" "IV" is a chemical formula. Was "I", the symbol for iodine intended?

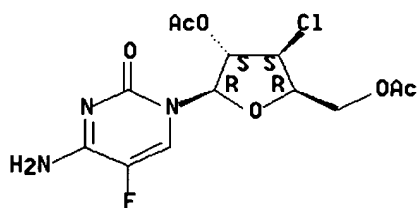
Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

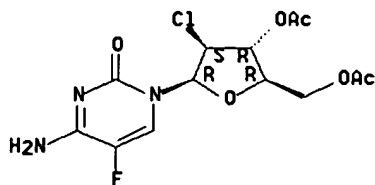
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

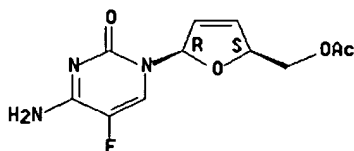
Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe (Journal of Medicinal Chemistry, Ref AK). The compound shown below fits formula (II) with $Q = R^1CH_2$, $R_1 = \text{hydrogen}$, $R_3 = \text{chlorine}$, and $R^4 = R^1CH_2C(O)O-$, with $R_1 = \text{hydrogen}$. It has Registry Number 74580-86-2 and is found in Scheme II, page 1089 of the reference. It is compound **11a**. Two additional anticipatory compounds are **11b** and **11c**. Synthesis is taught in the first two complete paragraphs on page 1094.



8. Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Lopez ('339, Ref AA). The compound shown below fits formula (II) with $Q = R^1CH_2$, $R_1 = \text{hydrogen}$, $R_3 = R^1CH_2C(O)O-$, with $R_1 = \text{hydrogen}$, and $R_4 = \text{chlorine}$. It has Registry Number 107232-36-0 and is found in Scheme II, page 1089 of the reference. It is compound **11a**.



9. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Shi (Journal of Medicinal Chemistry, Ref CA). The compound shown below fits formula (III) with $Q = R^1CH_2$ and $R_1 = \text{hydrogen}$. It has Registry Number 221156-23-6 and is found in Scheme 3, page 862 and is compound **15a** of the reference. Two additional anticipatory compounds are **15b** and **15c**. Synthesis is taught in the paragraphs 3-5, page 865.



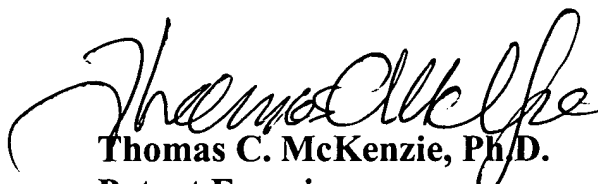
Allowable Subject Matter

10. Claims 1-24 are allowed. Claims 26, 28, 30-34, 36-40, and 42-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 29, 35, and 41 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. Please direct any inquiry concerning this communication or earlier communications from the Examiner to Thomas C McKenzie, Ph. D. whose

telephone number is (703) 308-9806. The FAX number for amendments is (703) 872-9306. The PTO presently encourages all applicants to communicate by FAX. The Examiner is available from 8:30 to 5:30, Monday through Friday. If attempts to reach the Examiner by telephone are unsuccessful, you can reach the Examiner's supervisor, Mukund Shah at (703) 308-4716. Please direct general inquiries or any inquiry relating to the status of this application to the receptionist whose telephone number is (703) 308-1235.


Thomas C. McKenzie, Ph.D.
Patent Examiner
Art Unit 1624

TCMcK